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Published in:
Midwifery

DOI:
10.1016/j.midw.2017.12.009

Published: 01/03/2018

Document Version
Peer reviewed version

www.elsevier.com/locate/midw

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PII: S0266-6138(17)30420-5
DOI: https://doi.org/10.1016/j.midw.2017.12.009
Reference: YMIDW2149

To appear in: *Midwifery*

Received date: 29 May 2017
Revised date: 24 November 2017
Accepted date: 6 December 2017

Cite this article as: Andrea Gilkison, Jean Rankin, Mary Kensington, Rea Daellenbach, Lorna Davies, Ruth Deery and Susan Crowther, A woman's hand and a lion's heart: Skills and attributes for rural midwifery practice in New Zealand and Scotland, *Midwifery,* https://doi.org/10.1016/j.midw.2017.12.009

A woman's hand and a lion's heart: Skills and attributes for rural midwifery practice in New Zealand and Scotland

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Abstract

Objective

The complex and challenging nature of rural midwifery is a global issue. New Zealand and Scotland both face similar ongoing challenges in sustaining a rural midwifery workforce, and understanding the best preparation for rural midwifery practice. This study aimed to explore the range of skills, qualities and professional expertise needed for remote and rural midwifery practice.

Design

Online mixed methods: An initial questionnaire via a confidential SurveyMonkey® was circulated to all midwives working with rural women and families in New Zealand and Scotland. A follow-up online discussion forum offered midwives a secure environment to share their views about the specific skills, qualities and challenges and how rural midwifery can be sustained. Data presented were analysed using qualitative descriptive thematic analysis.

Setting and participants

222 midwives participated in this online study with 145 from New Zealand and 77 from Scotland.

Findings

Underpinning rural midwifery practice is the essence of 'fortitude' which includes having the determination, resilience, and resourcefulness to deal with the many challenges faced in everyday practice and to safeguard midwifery care for women within their rural communities.

Key conclusions

Rural midwives in New Zealand and Scotland who work in rural practice specifically enhance skills such as preparedness, resourcefulness and developing meaningful relationships with women and other colleagues which enables them to safeguard rural birth.

Implications for practice

Findings will inform the preparation of midwives for rural midwifery practice.

Keywords:

Midwifery practice, midwifery preparation for practice, rural midwifery, rural practice

Introduction

Rural and remote communities need to be served by sustainable midwifery services yet recruitment and retention of midwives to these regions continues to be a challenge globally (Lehmann et al., 2008). In New Zealand and Scotland there is a shortage of midwives providing care in rural areas which creates a problem for a sustainable maternity provision for rural women (Kyle and Aileone, 2013, Miller et al., 2012, Royal College of Midwives 2017). With more focussed preparation and education, potentially more midwives will consider practising in rural areas, which will enable rural woman and their families to have their babies close to their homes. An international collaborative study in New Zealand and Scotland was conducted to gain contemporary insights into rural midwifery, which would inform the preparation, support and educational needs for midwives who practice in rural communities. This paper presents those aspects of the study that specifically explored the unique skills, qualities and professional expertise midwives required for sustaining rural practice. This paper presents details of the mixed methods, the main focus is on the presentation of qualitative findings obtained and analysed from both the survey and discussion boards.

Rural midwifery practice engenders a sense of remote geographical spaces and low population numbers; however a review of the literature has found wide-ranging definitions of what constitutes rural midwifery practice. The concept of rural within maternity services is often related to proximity to a base hospital or other medical facility. For example, in New Zealand, Kyle and Aileone (2013) define rural primary maternity facilities as those maternity facilities which are located at least 30 minutes from a base maternity facility with on-site obstetric services including caesarean section facilities. In Scotland, the definition of 'rural' has been based on five criteria; degree of remoteness; population density; settlement patterns; demographic profiles and economic profiles (Scottish Government 2014, Hundley et al., 2007).

Providing maternity care in rural and remote areas is not an easy task and it brings its own special set of demands, issues and challenges. One of the most obvious issues encountered by rural midwives is working in comparative isolation from other midwives and obstetricians, and the challenges of serving a wide geographical area, with long distances and travel time for transport to obstetric and neonatal services (Munro et al., 2013, National Health Committee (NHC), 2010, Patterson, 2007, Tucker et al., 2005). Rural midwives need to consider long distances when making decisions to involve medical staff or neonatal and obstetric services (Munro et al., 2013, Patterson et al., 2011, Tucker et al., 2005). Unlike their urban counterparts, rural midwives often make decisions while working alone in relative isolation (Kyle and Aileone, 2013, Miller et al., 2012). This becomes further complicated when transfer to

secondary or tertiary facilities involves ambulance or helicopter transport (Crowther and Smythe, 2016). These challenges compromise the sustainability of rural maternity services.

The hidden costs for travel and professional development further compromise the finances available for rural services (Kornelsen, 2009, Tucker et al., 2005). In situations where midwives are salaried by caseload size, then this can compromise rural midwives financially, as they are unable to take caseload numbers comparable with urban counterparts (Redshaw et al., 2012, Adair et al., 2012, Crowther and Smythe, 2016). Financial strains can cause rural midwives, specifically within the New Zealand system, to make a bare living from their profession (Adair et al., 2012, Crowther and Smythe, 2016). Recruitment and retention of qualified maternity care staff for rural areas remains an ongoing issue for future services in many countries world-wide (Stoll and Kornelsen, 2014, Grzybowski and Kornelsen, 2013, Kyle and Aileone, 2013, Fisher and Fraser, 2010, Tucker et al., 2005). Furthermore, living and practicing in relative isolation in rural and remote areas means that there are fewer opportunities to engage in inter-professional education (Crowther and Smythe, 2016, Ireland et al., 2007, Hundley et al., 2007, Tucker et al., 2005). This is compounded with poorer internet connections and less well-equipped libraries and resources (Crowther and Smythe, 2016, Ireland et al., 2007). Midwives find it difficult to attend professional development or further training due to the time and funding associated with leaving their communities and clients (Kornelsen, 2009).

Bourke et al. (2010) challenge the 'deficit approach' in rural care. They reported focusing on challenges which detracted from understanding the particular skill set needed for rural practice. The most essential capabilities needed for rural midwifery practice are confidence and expertise to make decisions and knowing when to call for back up (Cheyne et al., 2012, Harris et al., 2011, Hundley et al., 2007, Kyle and Aileone, 2013, Miller et al., 2012, Patterson et al., 2011, Tucker et al., 2005). Rural midwives and other rural maternity care providers are required to engage in competent risk assessment regarding the available secondary care services to make decisions about transfers (Cheyne et al., 2012, Tucker et al., 2005). Midwives working in rural settings need to work collaboratively with other midwives and health professionals regardless of distance (Crowther and Smythe, 2016, Miller et al., 2012, Harris et al., 2011, Hundley et al., 2007, Wakerman, 2004). Hospital based staff and urban midwives are sometimes unaware of the nature and complexity of decisions rural midwives have to make, which can result in under appreciation of their work and negative evaluations of their choices (Patterson, 2007, Tucker, 2004). Therefore, good interpersonal skills and ability to communicate tactfully with a diverse range of professional colleagues locally and at distance are key skills required by the rural midwife. The key skills identified as being required for rural midwifery practice are summarised in Box 1.

Box 1. Skills required for rural midwifery practice

- Confidence and expertise to make decisions and know when to call for backup (Cheyne et al., 2012; Harris et al., 2011; Hundley et al., 2007; Johnson and Onwuegbuzie, 2004; Kyle and Aileone, 2013; Miller et al., 2012; Patterson et al., 2011; Tucker et al., 2005)
- Ability to work interprofessionally and collaboratively (Harris et al., 2011; Hundley et al., 2007; Miller et al., 2012; Wakerman, 2004)
- Ability to work in the complexity of isolated work environment (Kyle and Aileone, 2013)
- Commitment to ongoing learning and access to additional training and an enhanced emergency skill set (Fahey and Monaghan, 2005 ; Kyle and Aileone, 2013; Miller et al., 2012; Tucker et al., 2005; Wakerman, 2004)
- Decision making about transfer from a rural or remote birthing unit to a specialist unit located at a distance (Johnson and Onwuegbuzie, 2004; Patterson et al., 2011).
- Some argue for the need for rural midwives to have generalist skills (such as nursing) in addition to midwifery (Fahey and Monaghan, 2005 ; Stewart et al., 2012).

There are few thorough investigations of the particular skills and capabilities needed for remote and rural midwifery, especially when it comes to professional education or continuous professional development (Ireland et al., 2007). 'Hands-on' skills courses such as Advanced Life Support in Obstetrics and the Neonatal Resuscitation Programme were found to increase confidence in practice, but no published evidence of effectiveness of such courses exists. Ireland et al. (2007) emphasised that more research is needed on the levels of skills and capabilities required specifically for maternity care professionals practising in remote and rural areas. The current study contributes to this gap by exploring and identifying the range of skills, qualities and professional expertise needed for rural midwifery practice in New Zealand and Scotland.

New Zealand and Scotland may be at different ends of the globe, but these two countries are excellent cases for comparison. Both countries bear similarities with regard to population, birth rate, landscape (National Records of Scotland, 2016; Statistics New Zealand, 2016) and model of maternity care (Scottish Government 2010; McAra-Couper et al., 2014). In both countries, midwives take on the role of main professional for women with low risk pregnancies, and midwives in New Zealand and Scotland also provide hospital-based midwifery services to rural women when inpatients. Table 1 summarises factors influencing the provision of midwifery care in NZ and Scotland.
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Table 1: Factors influencing the provision of midwifery care in NZ and Scotland.

	New Zealand (NZ)	**Scotland**
Population	4.693 million	5.295 million
Birth rate (live births)	62030	55098
Terrain	Rugged landscape with south island similar to Scotland	Rugged landscape
Registering body	Midwifery Council of NZ	Nursing and Midwifery Council
Maternity care model	Midwife-led/women-centred care models promoted.	Midwife-led/women-centred care models promoted.
Midwives role (low risk uncomplicated care)	Lead maternity carer (LMC)	Lead carer (Named midwife).
Work situation	Midwives can choose to be LMC or hospital based.	Midwives can be hospital or community based. Employed by National Health Service (NHS) in 14 NHS Board geographical areas.
Midwives payment	LMC midwives work in community-based practices. They are government funded on a contract for service basis to provide midwifery care (pregnancy, labour, birth and postpartum up to six weeks).	Standard payscale for community midwives with no separate remuneration for rural areas (pregnancy, labour, birth and postpartum).
	LMC midwives work in community based practices. Legally, LMC midwives can access named maternity facilities within their local communities. Rural midwives may work as LMCs providing continuity of care for women, or they may be employed	Community midwives' either work solely in rural/remote areas, or in mixed rural/urban areas and in urban/community areas. Approximately 23 small birthing units and midwife led units in Scotland providing midwife-led care in the local communities/rural areas (without input from medical, neonatal, or

	to staff rural maternity units.	obstetric staff).
Funding for maternity care (regardless of place of birth)	NZ Government for resident women.	NHS funded care.
Midwifery education	Both pre-registration and post-registration Education (undergraduate and postgraduate levels). Involves placements in rural/provincial sites for placement in their own community	Both pre-registration and post-registration Education (undergraduate and postgraduate levels). Can involve placements in rural sites for placement in their own community
Current recruitment challenges	Recruitment and retention of midwives for rural areas is a common problem resulting in a shortage of midwives providing rural care in both countries (Kyle and Aileone, 2013, RCM 2017). This renders recruitment and retention of qualified staff a high concern (Kyle and Aileone, 2013; Tucker et al., 2005) and creates a problem for a sustainable maternity provision in rural areas.	

Our international online study sought to recruit midwives working in rural and remote/rural practice from New Zealand (NZ) and Scotland to participate in a Survey with the option of participating in an additional discussion forum. Midwives self-identified themselves as being rural or remote-rural. Ethical approval for the study was obtained through ethics committees in the relevant Higher Education Institutions (Scotland and New Zealand) (AUTEC 16/02). Access to midwives was approved through the IRAS NHS Research and Development national centre linking to the 14 NHS Boards in Scotland and the New Zealand College of Midwives (NZCOM).

Methods:

This international study used a mixed methods research design conducted in two sequential parts adopting online approaches. This mixed methods design involved an online survey and an online discussion forum, which combined the strengths of both quantitative and qualitative research (Cresswell, 2013). The online approaches adopted made it possible to gather information about rural practice from midwives working in rural areas in both countries.

Part One involved the online survey collecting both quantitative and qualitative data. Researchers in New Zealand and Scotland developed the online survey with questions informed from relevant literature. Demographic questions focused on developing a profile of rural midwives in New Zealand and Scotland including geographical area of rural practice, how long they had worked as a rural midwife, modes of transfer and transfer time to an obstetric or neonatal and facility. The purpose of gathering this demographic information was to gain insight of the contextual realities across countries and highlight any divergent and convergent areas. In total, the survey contained 29 closed and open questions. The open-ended questions provided midwives with opportunity to provide further subjective information about what they enjoyed about rural practice, what challenged them, what skills they have developed for rural practice, and the preparation they had for their role or what preparation and support they would have preferred. To ensure the questions were relevant, appropriate and presented in an unambiguous way then the survey was piloted in New Zealand. Survey participants were invited to self-select to take part in the online discussion forum.

Part Two involved the online discussion forums for qualitative data collection to gain further subjective insight into aspects of rural midwifery practice. This online approach was an appropriate method to overcome the issues related to distance and the logistics of trying to bring midwives together. The forum provided participating midwives with a private and anonymous forum whereby they could freely share their views about recruitment and retention issues, challenges faced in rural practice and how rural midwifery can be sustained. The forum questions were informed by the issues about rural practice raised in the online survey in part one. Discussions included gathering viewpoints and experiences about the

challenge of the rural/urban interface; the importance and experiences of relationships with other health professionals and community groups/services; description of their rural community; and preparation they had for coping with situations faced when working rurally. Other questions focussed specifically on eliciting further information and viewpoints about the particular skills that stand out as being essential to rural midwifery practice and any points of difference to an urban midwife.

All participants adopted a pseudonym when engaging online to preserve their confidentiality. In addition, participants were requested to keep the identity of their workplace and region anonymous so they could share their experiences without breaching confidentiality and privacy. Participants could log into the forum in their own time, and were able to read the other comments posted by others only in their discussion group. The group discussions were kept secure with anonymity and confidentiality maintained. The online forums were asynchronous with two discussion forums held in New Zealand and only one forum held in Scotland.

Recruitment of Midwives

Midwives were recruited to the online survey through an invitation and link to the online survey sent to all midwives (n=2500) in New Zealand via NZCOM and to community midwives (rural and rural/urban) in Scotland (n=~270) via the Lead Midwife for each NHS board area. NZ midwives were sent an invitation inviting those midwives currently, or who had in the past, worked with rural women. There were about 2500 midwives on this general midwifery email list. There is no specific list for rural midwives in NZ, so a response rate was unable to be calculated. Recruitment of midwives in Scotland was very slow with a final response rate of 24% of midwives working in rural and rural/urban areas. In relation to the online discussion forums, 11 midwives in New Zealand self-selected to engage in two discussion forums. Recruitment in Scotland was difficult with only 3 midwives agreeing to participate in the online discussion forum.

Quantitative data analysis

Descriptive analysis was conducted on quantitative data, which were uploaded into SSPS from SurveyMonkey®. In total, 222 midwives agreed to participate in the online survey (New Zealand n=145; and Scotland n=77). Over 70% of New Zealand participants were case loading self-employed LMC midwives. Of Scottish participants, over 50% were community midwives (including labour and birth) and 48% providing mainly antenatal and postnatal care.

Data of interest collated included the time taken to transfer from rural areas to secondary and tertiary facilities and midwives rating of the skills they required for rural practice. In relation to transfers from rural areas to obstetric or neonatal facilities, the mean transfer time was 75 minutes for NZ and 88 minutes for Scotland. In both countries, the skills for rural practice most highly rated as being important included communication skills, collegial relationships, time management, assessment skills, forward planning and being up-to-date with dealing with emergencies.

Qualitative data analysis

A high volume of qualitative data was generated from the online survey and the online discussion groups. Researchers from the international collaboration individually analysed the data using a qualitative descriptive approach (Braun and Clarke, 2006). The data were analysed and comparisons made by researchers in both countries, and the final themes were agreed by consensus amongst all researchers in all four centres via face-to-face and online meetings. King's (2012) template analysis helped organise the findings as they emerged and provided a way of thematically analysing data. The template provided the initial descriptive themes for analysing the data from the online survey and discussion groups. A coding template was then developed which summarised themes such as 'Anticipation/resourcefulness and contingency planning' and 'rural midwife point of difference – skills to hone as a rural midwife'. With further analysis themes became more specific, including 'preparedness'

and 'safeguarding rural midwifery'. The template enabled themes to be grouped for separate publications.

Findings

A principle theme emerged which related to the courage and fortitude of midwives for rural practice. This meaningful essence of courage and fortitude running through the data was firmly combined with the passion and was consistently seen as being essential for providing midwifery care to women in rural communities. One of the New Zealand Midwives narrate the following:

I think the biggest requirement is COURAGE. Courage when it gets lonely, courage when lost in the bush trying to find the right house, courage to phone the nearest secondary facility to speak to the unreasonable charge midwife or grumpy obstetrician on-call, courage to make a decision e.g. transfer when old meconium is in the liquor when you believe the woman could easily carry on and birth at home or at the unit but guidelines state to transfer and as a midwife I know I am changing her labour preparing for the transfer, courage to deal with the police when the woman is on home detention and has a 7pm curfew yet she is in labour and needs to leave the house but it gets so complicated we decide to stay home, courage to deal with the vicious dogs that love nipping my calves, courage to kick them so my calves are left intact!, courage to provide the woman and her family with food in a way her dignity is left intact, courage to deal with the ambulance officer who is totally going by the rules hence the woman needs to be strapped in on the stretcher when she is coping much better on her knees in the ambulance, courage to get up in the morning and face the close knit community when a baby has died, courage to accept the invitation to a barn dance and all eyes are on you when trying to get your feet into the right steps but failing, courage to speak to the local kaumatua[1] on behalf of the woman, yes lots of courage to go to bed at night and try to sleep and courage to get up and looking forward to a new day with its wonderful challenges making a little difference for rural remote pregnant women and their babies. (Rori, forum, NZ)

This NZ midwife refers to courage in the context of rural practice as having the determination, commitment, and resourcefulness to deal with the many challenges she faced in her everyday practice. Courage for this NZ midwife ranged from the courage to sustain herself when she felt lonely, to courage to walk a journey alongside a woman in a difficult situation. Another midwife (Kim, forum, NZ) described the courage she brings to rural practice as having a "*Lady's hand and a lions heart*" and likened it to the book by Carol Leonard (2008). In this book of a midwife's saga, Leonard (2008) shows the gentle side of a "lady's hand" combined with the courage of a "lions heart" to describe midwifery practice in rural America.

Numerous other similar viewpoints were expressed to strengthen this principle theme of courage and fortitude. Underpinning the courage and fortitude of the characteristics of rural midwives, a further two principle themes clearly emerged from the data: '*The unique skill set for rural midwifery practice'* and *'Safeguarding rural midwifery practice'.* Subthemes emerged within each of these two principle themes which related to the theme but remained discrete. Figure 1 presents the principle themes and sub-themes clearly evident in the qualitative data from both NZ and Scottish midwives.

THE UNIQUE SKILL SET FOR RURAL MIDWIFERY PRACTICE

In addition to the skill set required for safe midwifery practice in all contexts, there was consensus that midwives working in rural practice also needed to have a distinct set of skills and capabilities essential for them to sustain effective rural midwifery practice. The principle theme of the '*unique skill set for rural*

midwifery practice' was underpinned by four subthemes including 'preparedness'; 'practical skills'; 'developing meaningful relationships'; and 'resourcefulness in the context of rural midwifery practice'.

Preparedness; anticipating and contingency planning

For rural midwives, who are often many hours away from secondary services, the skill of always being prepared, anticipating when there may be complications arising and planning for such potential contingencies was seen to be essential. Knowing when 'the normal' situation has changed is a core skill for all midwives, whatever the setting that they work in. For rural midwives often working on their own at a distance they also needed a range of other skills such as decision-making, organisational and time management. These were seen to culminate in them developing the ability to recognise, predict and anticipate early the timely need for transfer to a secondary or tertiary service. In complicated situations requiring emergency transfer, midwives also needed to hone those skills involved in stabilisation and transfer of mother and/or baby. The following quotes from midwives in Scotland and New Zealand emphasise the essence of the rural mindset involving planning, anticipating and being prepared.

The rural mindset is one of being able to anticipate problems and get transfers going early (often on your own), managing long transfers on your own, helping women change birthplace plans if labours are going faster than the distance to a unit allows, being creative in helping women access secondary care, and sometimes providing secondary care on behalf of the O&G team in the city until we can get the woman/baby to the right place. (Virginia, forum, Scotland)

….predicting how the progress (of the woman in labour) is heading is essential to timely decision making. (Survey, 2091, NZ)

From my years of being an rural / remote rural midwife I feel that the most essential skills are not only to be an experienced, up skilled with best practice and knowledgeable midwife, but to have the ability to know when 'the normal' has changed, to anticipate and plan the next move and /or the exit plan in a timely manner. (Louisa, forum, NZ)

This 'preparedness' described also took into account the unique context of rural practice and the potential safety and practical issues which could further complicate the situation. In this respect, rural midwives reported being well organised for the day ahead, and being prepared for eventualities such as someone birthing quickly, or the weather delaying her arrival.

You have to always think ahead and prepare for possible outcomes before they happen. (Survey, 0422, Scotland)

Over the years I have learnt to be organised. My car is always packed. I have bags and containers for every situation imaginable and have also provided the GPs and St John a wee box of birth items just in case. I also have one to leave at someone's home if we think they may birth quickly or the weather may slow my arrival and a simple outline of what to do. (Kim, forum, NZ)

The skill of being 'prepared' is one of the ways that rural midwives ensure the woman's safety, but also keep other health professionals safe.

One New Zealand rural midwife shares how all her thinking and planning is shared with the woman, her family and others around her:

> *In planning birth in a rural area the woman and her attendees need to be prepared. The 'how 'and 'when' to contact the midwife or if planning a hospital birth the time to travel and the possible barriers such as road conditions or weather. The plans also need to include if they are unable to make contact with their midwife and what is the back-up plan. Is there another midwife? And if not, which service is next. Who do they have living nearby and available to help, is there an easy description or marker for another midwife or another practitioner or emergency services to find the location / address? What barriers might there be to get access in or out of*

their home such as king tides, storms, snow and ice or flooded streams, impossible driveways, power outages, gates to open and close, dogs or other animals. As helicopters are used more, where would be the best landing area in good weather? Skills are needed in the planning of this thought process or a smooth exit if needed, without creating anxiety and causing an imbalance and subsequent fear for the woman, family, colleagues or self. (Louisa, forum, NZ)

The skill of being prepared for every eventuality is the way that this midwife safeguards normal birth for rural women. Being prepared was often closely linked with safeguarding normal birth in rural communities. Rural midwives need to understand the geography of the area and have the skills needed in their practice to face challenges from rural environments, climate conditions and the impact these have on the provision of midwifery care. This Scottish midwife summarises some of the challenges faced.

….driving in poorly maintained roads ,adverse weather conditions ,inappropriate vehicles for adverse weather conditions difficulty finding locations using maps, also some areas have poor or no mobile signals ,also driving when very tired if out at home birth may have been awake and working for more than 24hrs. (Survey, 0427, Scotland)

Practical skills

Rural midwives from both New Zealand and Scotland cited the need for very well honed and practised skills, particularly emergency skills. While all midwives need such skills, midwives working in remote and rural areas may well be on their own in an emergency and often with back up a distance away which is in contrast to their urban counterparts.

Decision-making, risk assessment, flexibility. Not that an urban midwife does not have these but that they are carried out in isolation in rural very often (Kate, forum, Scotland).

These skills identified need to be relevant, realistic and meaningful for rural practice settings. More local training in rural environments for all practical and emergency skills, was seen as being more authentic for rural practice.

I am a national obstetric emergencies trainer. Being able to access and provide relevant local training is essential. There is no point in accessing training at big units –very different skills are required, and different help is available. (Survey, 9819, Scotland)

Emergency skills and quick thinking on your feet is an essential skill for rural midwifery. In a sense this is a skill every midwife has as it is needed to be competent. However, I get the impression this sometimes gets lost in a hospital environment as there is always someone around that could do the suturing of a difficult perineal tear or resuscitate a flat newborn baby. (Rori, forum, NZ)

My team have monthly ANNP (advanced neonatal practitioner) updates, in which we practice neonatal resuscitation using skills and drills techniques to keep our skills up to date, these updates are very valuable to our team and give us confidence in providing neonatal resus, as it doesn't occur regularly here but allows us to be prepared when it does occur. (Survey, 4232, Scotland)

Qualitative data revealed specific skill needs for midwives in Scotland. These included issues such non-medical prescribing, newborn examination (theory and practice), child protection, violence against women and domestic abuse training, and female genital mutilation. The LMC model in New Zealand already includes the theory and practice skills of prescribing and newborn examination as part of current scope of midwifery practice and education.

Resourcefulness in the context of rural midwifery practice

Being resourceful was consistently seen to be an essential skill in the context of rural practice. This resourcefulness was seen to encompass midwives being capable, practical-minded, creative, adaptable, and included building effective relationships with other health professionals and with women.

Make do with anything - so learning to be creative is a personal skill that has grown. Be prepared for being stuck in a rain or hail or snow storm. So always have a thermos with hot water handy, snacks, gumboots and rain jacket as well as warm merino gloves and hat and a sleeping bag… A highly functioning car is provided, good mobile phone and pager and consumables for the birth etc. is usually well stocked. It helps that the community is behind us midwives and invites us to their events. (Survey, 0472, NZ)

…….I have had similar experiences over the years (in relation to rural-urban transfers). Battling through appalling weather accompanying a woman to hospital, avoiding deer etc.! I arrived one night dressed in jeans, wellies and huge winter sweater ……. (Sarah, forum, Scotland)

First and foremost I am myself a farmer, I can talk tractors, calving cows and whelping pups! I have driven and ridden vast areas of rural New Zealand and know the area and the people. As a kiwi farmer I have a "number 8 wire" mentality that finds multiple possible solutions to any given problem. (Survey, 9761, NZ)

The New Zealand term “number 8 wire” refers to the gauge of wire used for sheep fencing. Remote farms often have rolls of it on hand, and it is used inventively to solve all kinds of mechanical or structural problems. This came to represent ingenuity and resourcefulness. The ingenuity and resourcefulness is what extends to the practice of rural midwives in this study. Working in a rural setting also needs the midwife to be adaptable and flexible when working in community teams. They are often required to fulfil many roles and deal with situations in local areas both relating to and in addition to midwifery.

As a rural midwife you have to be many things to many different women. Working with women from many multi-cultural back grounds can throw up the occasional curve ball so being non-judgemental and excellent communicator is essential. (Helen, forum, NZ)

(You) need to be an experienced midwife in all areas to be able to practice safely, need to trust your own judgment, learn to factor travel and isolated womens psychological needs into your time management, have a robust system for keeping supplies plentiful, expect the unexpected and be able to deal with whatever crops up. (Survey, 2604, Scotland)

The skill and ability to communicate with women and families with social complications and families from diverse backgrounds is magnified in a small rural community as emphasised by these midwives.

SAFEGUARDING RURAL MIDWIFERY PRACTICE

The second principle theme *‘safeguarding rural midwifery practice’* referred to the preservation and protection of rural practice in terms of women, their families and communities, midwives and their families and the midwifery profession. In this sense safeguarding was about ensuring that rural midwifery continued to exist and be part of rural communities despite the challenges. Two subthemes emerged including ‘*sustaining self*’ and ‘*safeguarding women and families’.*

Sustaining self

The subtheme ‘sustaining self’ referred to midwives’ recognising that to survive and thrive in rural midwifery practice that they needed to be self-dependent, self-reliant, self-supporting and have a healthy work-life balance. This ‘sustaining self’ was evident on several levels and appeared to be interrelated. There was agreement that midwives needed to have both physical and mental stamina to cope effectively with the environment and diverse nature of the work in rural areas. It was also felt they needed to believe in themselves, and have decisiveness, stamina, and courage to help cope with the challenges in rural practice.

I think rural midwifery requires stamina. Stamina to drive 4 hours to the hospital with a woman, attend her birth, and then limp home with numerous sleep stops. Stamina to visit a woman with breastfeeding issues every day, although she lives over an hour away (from anybody). (Virginia, forum, NZ)

For the rural midwife and especially in remote areas there is often no-one to back her up after a long labour requiring transfer or when things become complicated. Midwives require both physical and mental stamina to manage these situations
Transfers can get complicated and often the midwife in the rural areas needs moral support. This never happens. (Survey, 0502, Scotland)

Midwives were conscious that they needed a healthy balance in their work life and family life and also needed to be responsible for initiating training and support to keep their professional skills and knowledge updated. There was evidence to suggest that midwives used a variety of different ways to protect their health and preserve their work life balance. This included midwives living and working in the same small community and creating professional boundaries as a way of safeguarding self.

Finding a work life balance. Protecting myself and the demands of providing personal care and the responsibility that goes with this. (Survey 4036, NZ)

To have local knowledge of area is very helpful. Being able to deal with the great outdoors and enjoying it! (Survey, 0430, Scotland)

New Zealand has a rural midwifery locum service, which this midwife recommends making the most of so that burn out can be prevented:
Making the most of using the rural locum facilities to enable time off to avoid burn out. (Survey 7629, NZ)

Other midwives spoke of their passion for the rural environment and its sustenance for them.

The ability to stop every day and breathe in the mountains and breathe out the day ☺[sic](Survey, 1797, NZ)

The region is beautiful and I am paid to travel in one of the most scenic regions in the world to visit families on the caseload, I have to pinch myself sometimes. (Survey, 0418, Scotland)

The geography of the environment provides both sustenance and challenges. The beauty of the environment and the rural community sustains the midwife, but the environment also poses some challenges when transfer is needed. This viewpoint is summarised by a Scottish midwife:

Rural midwifery can be challenging, rewarding, fun and exciting. It can also be tiring, lonely, difficulty and terrifying! (Survey, 0413, Scotland)

Safeguarding women and families
Midwives spoke at length of the way they ensured that birth would be safe and satisfying for the women. This referred to listening to women and their families about what they wanted during pregnancy and birth, keeping them informed and supporting them in their care. This was felt to be an important part of rural midwifery practice and the midwife had a role in safeguarding it.

Belief in normal physiology of birth. Awareness and understanding of the needs of rural women, and the barriers to receiving care. Confidentiality in an area where people know each other, maintaining women's privacy can require extra thought/flexibility (location of visits etc.). (Survey, 6029, NZ)

….. The idea that a midwife only deals with 'normal' is interesting. The reason a midwife is confident to provide care to normal is because she is actively making a safe space for that woman in which she is quietly monitoring everything that is happening so that she can recognise any deviation from normal and manage appropriately. There are small numbers of births and with the changing demographics the women considered low risk is changing however we still need to be able to manage the planned and the unplanned. (Heather, forum, Scotland)

A New Zealand midwife spoke about needing to make clear decisions about what is normal in a rural setting where she states that:

A wide variety of normal is perhaps more keenly apparent in rural practice given the need to try to avoid unnecessary transfer to obstetric unit. (Survey 6029, NZ)

Rural midwives who participated in this study demonstrated a deep commitment to safeguarding birth in rural communities. They do this through protecting normal birth at the same time as making judicious decisions when there is the need to transfer to an urban maternity unit.

Discussion

This study has explored the particular skills, qualities and professional attributes for sustainable rural midwifery in New Zealand and Scotland. The findings of this study enhance knowledge about the distinct skills for rural midwifery practice which will inform the preparation, recruitment and retention of rural midwives.

Rural midwives in this study spoke of essential skills and capabilities needed for rural midwifery practice. Skills included practical skills such as proficiency in emergency situations, being prepared and anticipating the need for more specialised care, having good interprofessional relationships, and relationships with women and their families. Such skills are the skills for all midwives wherever they work, and this study has found that rural midwives in NZ and Scotland certainly hone these midwifery skills. Further, rural midwives in this study combine their well-honed midwifery skills with personal attributes of courage and fortitude.

Courage and fortitude for rural midwives is about being determined, resilient and resourceful. In our study courage and fortitude were expressed in the way that midwives approached practice to meet the needs of rural women. The skills of preparation and anticipation were found to be at the forefront of midwives' minds due to the challenges of distance, weather, road conditions or unavailability of transport. Fortitude conjures up the meaning of resilience. For these midwives, the ability to be resilient, does not mean 'hardening up', but means having the ability to sustain themselves in an environment which can be lonely at times.

These findings resonate with those international studies emphasising the imperatives to strengthen rural midwifery. Our study goes further by providing evidence that rural midwives need unique skills underpinned by attributes of preparedness, resourcefulness, and passion for a sustainable rural midwifery workforce.

Both New Zealand and Scotland governments have a key priority to provide care closer to people's homes and findings from this present study will inform government health priorities. The Ministry of Health in New Zealand has determined that health professionals need to have skill sets to provide a wider range of services in community settings and support people receiving health care closer to home (Ministry of Health, 2016). Scottish maternity policy and related reports recommend provision of a sustainable service for women and their families that is family centred and personalised with the overall aim to ensure care delivery remains close to their local community (Scottish Government, 2017, Scottish Government, 2011). Improving the recruitment and retention of skilled rural midwives may be one way to improve access to maternity care for women living in rural parts of New Zealand and Scotland.

Providing a sustainable rural midwifery service is a priority area not only in New Zealand and Scotland but in numerous countries world-wide. Provision of rural maternity services is an international issue of providing equitable and safe maternity services for all women (Kennedy et al., 2016, Rolfe et al., 2017). A

recent Australian study found that the equitable planning and maintenance of rural and remote Australian maternity services is sub-optimal, and birthing outcomes consistently show that rural and remote Australians have worse outcomes compared to urban families (Rolfe et al., 2017).

In the international forum, Kennedy et al (2016) in the Lancet series for global health have identified research priorities to improve the quality of care for every woman and child. The seventh research priority with a research priority score of 89 is around evaluating the effectiveness of midwives working with other health professionals in achieving quality maternal and newborn care. This includes timely transfer of women to appropriate level/site of care, management of emergency situations, maximal use of skills and capabilities and shared decision-making and accountability (Kennedy et al., 2016). This study has added to knowledge of the distinct skills and required for rural midwifery, and as such will inform ongoing education and preparation for rural practice.

The environment which rural midwives work in both challenges and protects midwives and the women and families they care for. The geographical environment and the relationships midwives develop in their rural communities with other health professionals and women both sustains and safeguards normal birth, while also providing the greatest challenges for rural midwives that of isolation and the distance to secondary care services. This study has identified both the practical skills such as management of emergencies, anticipating the need for transfer and that these are indeed the skills which rural midwives in New Zealand and Scotland have acquired through experience. The findings of this study expand on previous work by describing the attributes necessary for rural midwifery practice.

The attributes of courage and fortitude, combined with the passion, resilience and resourcefulness needed for rural practice can potentially be learned with rural experience, whether that be as a student or as a midwife new to rural practice. Preparation for rural practice will be the subject of a forthcoming paper.

Strengths and limitations of the study

The online approaches made it possible to conduct this large international collaborative study across two geographically divided countries. As a result, one key strength is the large sample size with good representation of midwives working in rural environments across New Zealand and Scotland in both employed and self-employed capacities. The online methods used for data collection were appropriate for conducting this study in an efficient and effective way. It is acknowledged that the midwives were recruited using convenience sampling and the questionnaire was self-administered with the potential for a response bias with only those midwives with strong views responding. New Zealand midwives readily identified themselves as being rural midwives. This was not always the case with some Scottish midwives who were reluctant to identify themselves as working in rural areas despite their geographical region within the defines of rural practice. Whilst New Zealand and Scotland have different maternity systems, study findings are similar in both contexts and may be transferrable to other rural midwifery settings.

Conclusion

Rural midwives in New Zealand and Scotland develop an attitude of courage and fortitude as a unique skill set which underpins their practice. Midwives who choose to work in rural practice specifically enhance skills such as preparedness, resourcefulness and developing meaningful relationships which enables them to safeguard rural birth. Ensuring these skills are developed through adequate educational strategies will help ensure that working in these regions is attractive and sustainable thus helping with recruitment and retention concerns.

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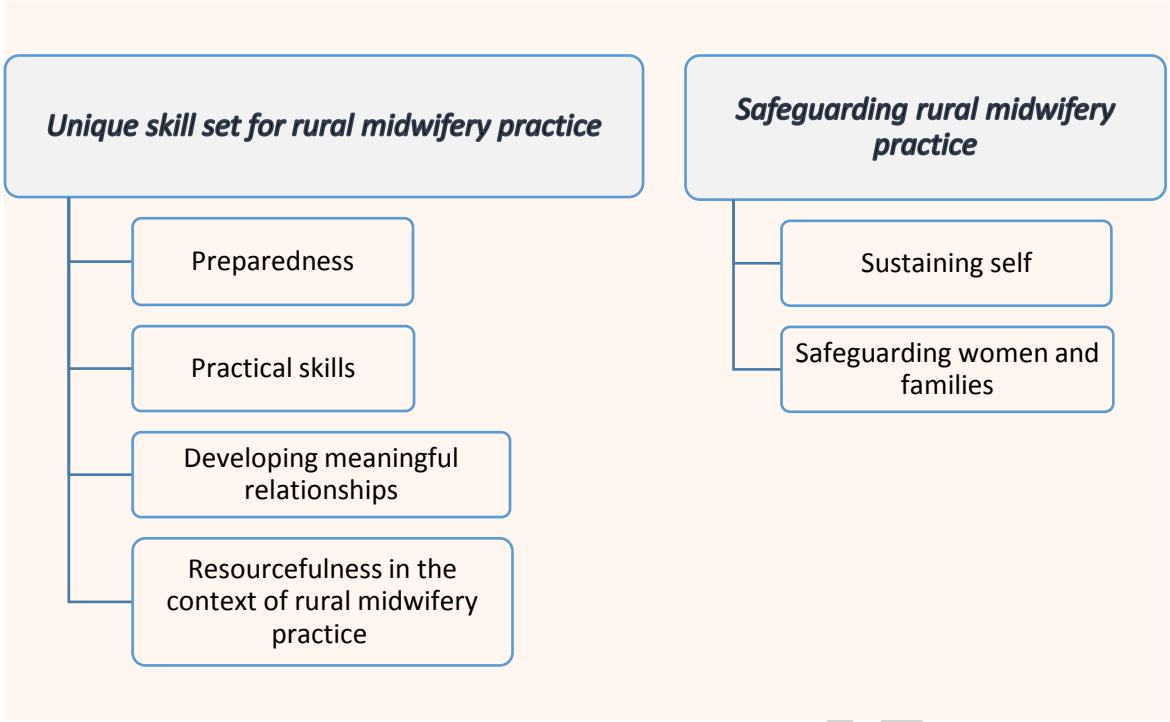
Figure 1. Principle themes and sub-themes for sustaining rural midwifery practice. (In colour if possible)

Courage, resourcefulness and passion of midwives in rural practice



Highlights

Rural midwives develop unique skills
Courage and fortitude for rural midwives means being determined, resilient and resourceful
Sustainable rural midwifery practice requires preparation for the role